

### Remarks

The Official Action mailed October 22, 2009 has been carefully considered. Claims 1-5, 9-14 and 19-22 are pending in the present application. Reconsideration and allowance of the subject application, as amended, are respectfully requested. Claims 10, 11 and 21 have been cancelled.

Claim 1 has been amended to recite "An animal chew toy comprising:

a body portion, said body comprising a compressible material and a first non-woven fabric material selectively positioned on said compressible material at locations that are prone to the chewing or biting action of said animal.

said first fabric material comprising multiple layers of non-continuous staple fibers comprising aramid or linear polyethylene or spun liquid crystal polymer which are blended with fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi.

wherein said non-continuous staple fibers have a monoaxial orientation of greater than about 50%,

wherein said multiple fabric layers have an axis of orientation providing higher strength in one direction versus another direction and wherein an axis of orientation of one layer is not aligned with an axis of orientation of an adjacent layer; and

a second non-woven fabric material at least partially disposed over said compressible material and over said selectively positioned locations of said first non-woven fabric material, said second non-woven fabric material consisting of fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi."

Support may be found in claim 21 (now cancelled) for "a first non-woven fabric material selectively positioned on said compressible material at locations that are prone to the chewing or biting action of said animal". Support for aramid, linear polyethylene and spun liquid crystal polymer may be found in paragraphs [0018]-[0021] of the published U.S. application as well as in dependent claims 10 and 11 (now cancelled). Paragraph [0012] also recites that high strength fibers may be blended with conventional fiber material and that the fabric material may be selectively positioned in areas prone to chewing. No new matter has been added. The remainder of the amendments to claim 1 provide clearer language and only comprise relocating phrases within the claim. Accordingly, no new matter has been entered.

Note that the second fabric material now “consists of” fibers having a tensile strength less than 50,000 psi. and/or a modulus less than 500,000 psi.

Claims 1-5, 9-14 and 19-22 have been rejected under 35 U.S.C. § 112, second paragraph, on the grounds of being indefinite. The phrase which was objected to has been cancelled.

Claims 1-5, 9-14 and 19-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Denesuk et al. (US 6,196,156) in view of Jordan (US 5,226,384), Sullivan (US 5,087,499) and Lin et al. (US 5,354,605) and Wellington Sears Handbook of Industrial Textiles, page 60.

Denesuk et al. appears to be directed at a bedding article for supporting a domestic animal and including a microbe-inhibiting agent. Denesuk et al. discloses that pets, especially dogs, may tear the bedding article and offers no constructional solution to such tearing, but rather directs that the materials used be non-toxic (col. 8, line 64 to col. 9, line 30). In other words, Denesuk et al. would therefore not be recognized as solving the problem addressed by the claimed invention. Further, Denesuk et al. does not teach or suggest “a second non-woven fabric material partially disposed over said compressible material *and over said selectively positioned locations* of said first non-woven fabric material”. Denesuk et al., in **FIG. 4**, only discloses a microbe-inhibiting lining attached to an inner side of a cover, that is, a second material completely overlying a first material which completely overlies the core, and does not disclose a second material disposed *directly over the core* or selectively positioning a fabric layer into locations that are prone to the chewing or biting action of said animal.

Page 3 of the *Office Action* notes that “Denesuk does not teach that at least one of the fibers should be a high strength fiber” and turns to Jordan for teaching that “high strength fibers such as aramid fibers can be used in forming covers for articles used by pets.” Jordan appears to also be directed at an animal bed having a resilient core and a cover, the cover comprising an aramid sheet laminated to a polyester sheet. Jordan does not teach or suggest a first fabric comprising *multiple* layers of aramid or linear polyethylene or spun liquid crystal polymer non- continuous staple fibers which are *blended* with non-high performance fibers and a second fabric consisting of fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi. (see amended claim 1).

In other words, it is not understood where the art of record teaches or suggest that by utilizing non-continuous staple non-woven fibers one would still retain advantages of the high-performance fibers suitable for an animal chew. Applicants understand that this application has been through a good amount of prosecution, and respectfully submits that such a feature are not in Denesuk (who has been recognized as not teaching that at least one of the fibers should be a high strength fiber), and not in Jordan (who laminates KEVLAR to polyester), and not in Sullivan (who teaches blends of KEVLAR with other fibers and intertwining of the staple yarn to form a garment), and not in Lin (unidirectionally aligned fibers, which although mentioning staple fibers, goes on to disclose that they are felt, knitted or woven).

Continuing, the *Office Action* references Sullivan for teaching that "it is known in the art to blend high strength fibers with other fibers." *Office Action* page 3. Reference is made to column 3, lines 56-64 of Sullivan, which is reproduced below for the convenience of the Examiner:

"The present invention provides improvements in the art of puncture-resistant garments and the method of making these types of garments. The inventive method may use any known fibers that have puncture-resisting characteristics. Examples of these types of fibers are polyaramids, polyethylene, polypropylene, scleroproteins (silks), cotton, fiberglass, nylon, polyurethane, and combinations thereof."

As can be seen from the above, which was relied upon for teaching *blends* of "high strength fibers with other fibers such as cotton, silk, nylon, and polyolefins (Office Action at page 3, lines 15-16), the reference is actually teaching that the indicated fibers all have "puncture resisting characteristics" and does not differentiate the materials by tensile strength or modulus. Sullivan appears to be directed at the addition of a brushing step or coating of a yarn either after the yarn is made or after the yarn has been woven or knit into a garment.

Sullivan is silent regarding the blending of aramid or linear polyethylene or spun liquid crystal polymer non-continuous staple fibers with fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi. Sullivan regularly refers to "combinations of" types of fibers but does not go on to distinguish how such fiber types may be combined. Sullivan at column 4, lines 15-16 discloses that "[t]he staple yarn 1 is made up of a plurality of individual fibrils 5 intertwined together. (Emphasis added.) Accordingly, it is submitted that any references to combinations of fibers or forming a yarn from first and

second fibrils includes intertwining of such fibrils. (To one skilled in the art, intertwined would be defined as twisted together, or enfolding encircling.) Since claim 1 recites “nonwoven fabric”, it is submitted that Sullivan does not support an obviousness rejection.

It is therefore respectfully submitted that the U.S. ‘499 reference does not recognize or teach or suggest the unexpected ability to blend aramid or linear polyethylene or spun liquid crystal polymer non-continuous staple fibers with fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi for an animal chew toy as now recited in amended claim 1.

In addition, Applicant respectfully disagrees with the statement at page 4 of the *Office Action* that “Jordan teaches employing *multiple* layers of high strength fibers for use in forming article for use by pets.” To the contrary, Jordan is quite specific that the Kevlar® layer is a single sheet (column 4, line 16), sole layer (column 4, line 20) or a laminate made of “a Kevlar® aramid sheet and a polyester sheet (see Abstract and claim 1).

Further neither Denesuk or Jordan teach or render obvious a first non-woven fabric material comprising *multiple layers* of aramid or linear polyethylene or spun liquid crystal polymer non-continuous staple fibers *blended* with fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi, wherein each layer may have an axis of orientation, and *wherein an axis of orientation of one layer is not aligned with an axis of orientation of an adjacent layer*. In addition to the above, it is noted that independent claim 1 recites that a second non-woven fabric material is partially disposed over the compressible material and said selectively positioned locations of the first non-woven fabric material.

Lin et al, is cited for teaching multiple layers of nonwoven fabrics, the layers having different axes of orientation. Lin et al, in a manner similar to Sullivan ‘499, is only utilizing high strength fibers for the disclosed soft armor composite. Lin et al. discloses cross-plyed network layers of unidirectionally aligned fibers and does not teach the recited blending of aramid or linear polyethylene or spun liquid crystal polymer non-continuous staple fibers and fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi, that still provides “an axis of orientation providing higher strength in one direction versus another direction and wherein an axis of orientation of one layer is not aligned with an axis of orientation of an adjacent layer.” See amended claim 1.

The cited art does not teach or suggest that one could reduce the need for aramid or linear polyethylene or spun liquid crystal polymer non-continuous staple fibers by blending them with fibers having a tensile strength less than 50,000 psi and/or a modulus less than 500,000 psi, including the feature of an axis of orientation of one layer that is not aligned with another layer, and provide a animal chew that still provided satisfactory performance in tearing and puncture. See again, amended claim 1.

Claims 2-5, 9, 12-14 and 19-20 and 22 depend directly or indirectly from amended claim 1 and are believed to be similarly distinguished.

Having dealt with all the objections raised by the Examiner, it is respectfully submitted that the present application, as amended, is in condition for allowance. Thus, early allowance is earnestly solicited.

If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603.668.6560.

In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

Respectfully submitted,

By: /Steven J. Grossman, Ph.D./  
Steven J. Grossman, Ph.D.  
Reg. No. 35,001

Dated: February 16, 2010